



CITY OF SAN ANTONIO

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March 21, 2005

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Richard Varn, Interim
Chief Information Officer

Gary Moeller
Director, ITSD

Gentlemen:

RE: Issue Final Report – Information Technology Services Application Change Controls Audit

The Application Change Controls Audit, which was approved by the Governance Committee as part of the FY2004-2005 Audit Plan, has been completed.

The scope of this audit was limited to reviewing application change controls for the various mainframe system programs and the SAP System. The report highlights nine audit findings that can be used as opportunities to improve internal controls within the application change lifecycle. At this time, the mainframe systems are the most vulnerable from a risk perspective based upon the issues identified. This seemed unusual to the audit team since the City has used and made changes to such applications for many years. The ERM Project SAP System presented fewer risk challenges to the City. To avoid the pitfalls commonly encountered, ITSD Staff should not delay completing the required documentation for the SAP System due to other priorities.

The following issues are detailed in the audit report:

Mainframe System Programs:

- Application development standards were not documented.
- Mainframe security guidelines and procedures did not exist.
- Mainframe application change procedures were not documented.
- Use of production data for test purposes was not documented.
- Version control occurred manually in some cases.

SAP System:

- The process for making changes directly to the production system was not documented.
- Operating system level security guidelines were not documented.
- Emergency change management procedures were not documented.
- Changes were not consistently documented in the issue-tracking database.

A conclusion was made on the effectiveness of internal controls for both the mainframe and SAP System. It was formed through performing generally accepted audit procedures and was based on a Risk Management Capability Matrix. Figure 1 in the audit report is a more detailed description of the capability matrix.

It was determined that the process capability stage for mainframe system programs application change controls was "Ad Hoc". In the general definition of this stage, it means that procedures do not formally exist, and that controls were either non-existent, or primarily reactionary. The "Ad Hoc" Stage usually indicates that there are no metrics/measurement or monitoring of performance. Through the formalization of change procedures, documentation of these, and with enhanced security, the mainframe system programs application change controls could improve from "Ad Hoc" to "Defined" Stage.

It was determined that the process capability stage for SAP System application change controls was "Defined". At the "Defined" Stage, procedures are usually well documented but not regularly updated to reflect changing business needs. Generally, at this stage both preventive and detective controls are used. However, there were no metrics stated for the change control process that could be used for measurement. With moderate effort, the City's SAP System application controls could be improved to the "Managed" Stage. This level could be achieved through the regular updates of documentation supporting the change cycle, and through implementing metrics to monitor the performance of each critical change function.

The current state of internal controls in the mainframe application programs environment will continue to pose a significant risk to data operations at the City of San Antonio. Several high profile and/or public safety related applications reside on the ITSD Mainframe System. These include the 9-1-1 Central Dispatching, Case Reporting System (used for EMS), and the Municipal Courts Warrants and Citations. The cumulative affect of the control weaknesses could present substantial difficulty recovering from a critical computer application system failure, or from the loss of key employees. Overall, current ITSD documentation does not meet any of the generally accepted standards. As such, it may not be reliable in training replacement personnel, or in a time of crisis when remote or recovery operations may be required.

The assistance provided by ITSD Personnel during this audit was extremely helpful and greatly appreciated. Department Management has provided specific corrective action and dates for completion. The Interim Chief Information Officer (CIO) has also reviewed and concurred with the issues raised by the audit, and with the actions planned by ITSD. It is also appropriate to thank the Interim City Manager, Mr. J. Rolando Bono, for this opportunity to review the City's information systems operations. While this particular audit project did not result in hard dollar cost recoveries, it did establish prospective benefits to the City through recommendations for improved effectiveness for these processes. It further provided the Interim City Manager and CIO with a critical status report on several key processes within ITSD.

Should you have any questions, a presentation on this audit will be scheduled for the next Governance Committee Meeting. We are also available for individual discussions or briefings if you would prefer.

Sincerely,



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